

Implementation Plan



Production Sector

Company Information

Partner Address Label Here

If the information provided above is incorrect,
please make corrections below.

Company Name: ConocoPhillips Upstream Lower 48

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Implementation Plan Elements

ELEMENT 1 Best Management Practices (BMPs)

The following BMPs have been identified as significant opportunities to cost effectively reduce methane emissions from the production sector. They were selected based on their applicability to the industry, economic feasibility, and cost-effectiveness. There are 2 core BMPs for the production sector:

- BMP 1** Identify and replace high-bleed pneumatic devices
- BMP 2** Install flash tank separators on glycol dehydrators

For detailed information on these BMPs, please refer to the Lessons Learned publications on the Natural Gas STAR Web site: www.epa.gov/gasstar/lessons.htm.

ELEMENT 2 Partner Reported Opportunities (PROs)

Current partners have reported many processes and technologies that are considered "other Best Management Practices" by the program. New partners are encouraged to evaluate and report current and new practices or technologies that cost effectively reduce methane emissions. PROs are made available to all partners, and can be viewed at: www.epa.gov/gasstar/pro/index.htm#table.

ELEMENT 3 Inventory Past Reductions

Partners are encouraged to report past methane emission reductions back to 1990. Accounting for these historical reductions will create a permanent record of your company's methane emission reduction efforts. More information is available in the Spring 1999 Natural Gas STAR Partner Update, which can be viewed at: www.epa.gov/gasstar/newsletters.htm.

The Implementation Plan is designed to be a dynamic tool for Natural Gas STAR Partners to plan their program activities. As company priorities and plans shift over time, the Implementation Plan may be revised or updated by submitting a new form to the program.

ELEMENT 1
Best Management Practices

BMP 1
Identify and Replace High-Bleed Pneumatic Devices

Pneumatic devices used to control and monitor gas and liquid flows and levels in dehydrators and separators, temperature in dehydrator regenerators, and pressure in flash tanks emit large amounts of methane into the atmosphere. Replacing these with low- or no-bleed devices reduces or eliminates emissions and improves safety.

Estimated Reduction
Potential
124 Mcf/year/device

Will you be implementing this BMP? ☐ Yes ☒ No

If no, why?

- ☐ Not cost effective
☒ May consider at a later date
☐ Other _____

Please describe: While this is a proven technology for delivering reductions in our fugitive methane emissions, at this time we are focusing on using FLIR technology to identify fugitive methane emissions. We are also in the process of implementing our Environmental Management Information System (EMIS) which will give us a well populated inventory of equipment locations in the field. EMIS will act as a "kicking-off" point for identifying those areas where we should focus with regards to High-Bleed Pneumatic devices. Our intent is to use FLIR technology as a tool

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
☐ Pilot Project
☐ Other _____

Please describe: _____

Activity Summary

Number of high-bleed pneumatic devices in system? _____

Number of high-bleed pneumatic devices to be replaced? _____

Replacement Schedule

Number of high-bleed pneumatic devices to be replaced by the end of:

Year 1: _____ Year 2: _____ Year 3: _____ Year 4: _____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

BMP 2
Install Flash Tank Separators on Glycol Dehydrators

Installing a flash tank separator in a glycol dehydrator facilitates the removal of methane and natural gas liquids from the glycol stream. The recovered gas can be put back into the pipeline, used as a fuel on-site, or flared.

Estimated Reduction
Potential
170 scf/MMcf of throughput

Will you be implementing this BMP? ☐ Yes ☒ No

If no, why?

- ☐ Not cost effective
☒ May consider at a later date
☐ Other _____

Please describe: While this is a proven technology for delivering reductions in our fugitive methane emissions, at this time we are focusing on using FLIR technology to identify fugitive methane emissions. We are also in the process of implementing our Environmental Management Information System (EMIS) which will give us a well populated inventory of equipment locations in the field. EMIS will act as a "kicking-off" point for identifying those areas where we should focus with regards to Flash Tank Separators on Glycol Dehydrators.

If yes, at what scale will you be implementing this BMP?

- ☐ Company Wide
☐ Pilot Project
☐ Other _____

Please describe: _____

Activity Summary

Number of glycol dehydrators currently equipped with flash tank separators _____

Number of glycol dehydrators suitable for flash tank installation? _____

Replacement Schedule

Number of flash tank separators to be installed by the end of:

Year 1: _____ Year 2: _____ Year 3: _____ Year 4: _____

Additional Information on Anticipated Plans and Projects

If additional space is needed, please continue on the back.

ELEMENT 2

Best Management Practices

PROs

Your company may take advantage of additional technologies or practices to reduce methane emissions. These can be reported to Natural Gas STAR as PROs. Following is a list of some of the PROs that have been reported by other Gas STAR partners, which may be applicable to your operations (for more information on these PROs, please view: www.epa.gov/gasstar/pro/index.htm and www.epa.gov/gasstar/lessons.htm):

- φ Install Vapor Recovery Units (VRUs)
- φ Install flares
- φ Install electronic safety devices

- φ Install instrument air systems
- φ Eliminate unnecessary equipment and/or systems
- φ Install plunger lifts in gas wells

| PROs you will be implementing | Please describe |
|--|---|
| <p>PRO <u>Forward Looking Infrared Leak Detection Technology</u></p> <p>At what scale will you be implementing this BMP?</p> <p> <input checked="" type="checkbox"/> Company Wide <input type="checkbox"/> Pilot Project <input type="checkbox"/> Other _____ </p> | <p><u>The initial focus of our Gas STAR program in ConocoPhillips Upstream L48 BU will be to use FLIR camera technology to identify fugitive emissions at our facilities and locations. We have purchased three GasFind IR cameras, and three Hi-FLO sampling devices to identify and quantify emission sources. We also anticipate using aerial FLIR fly-overs to evaluate our assets like pipelines, wellheads, and tank batteries.</u></p> |
| <p>PRO _____</p> <p>At what scale will you be implementing this BMP?</p> <p> <input type="checkbox"/> Company Wide <input type="checkbox"/> Pilot Project <input type="checkbox"/> Other _____ </p> | <p>_____</p> |
| <p>PRO _____</p> <p>At what scale will you be implementing this BMP?</p> <p> <input type="checkbox"/> Company Wide <input type="checkbox"/> Pilot Project <input type="checkbox"/> Other _____ </p> | <p>_____</p> |
| <p>PRO _____</p> <p>At what scale will you be implementing this BMP?</p> <p> <input type="checkbox"/> Company Wide <input type="checkbox"/> Pilot Project <input type="checkbox"/> Other _____ </p> | <p>_____</p> |

ELEMENT 3
Inventory Past Reductions

An inventory of past reductions will help to create a permanent record of your past efforts.

As a first step, many new partners find it useful to inventory and document past methane emission reduction efforts. The inventory process helps companies quantify the success of their past activities and target future emission reduction efforts. Historical emission reductions identified as part of the inventory process can be reported to the Gas STAR Program.

Will you inventory past activities to include in your annual report? ☒ Yes ☐ No

If yes, please describe your company's plans for reviewing past emission reduction activities.

Historically, ConocoPhillips and Burlington Resources were active participants in the Gas STAR program. We already have historical data from both companies reported to EPA. Our new efforts will only focus on the combined asset base moving forward.

The Natural Gas STAR Program thanks you for your time.

Please send completed forms to:

Regular Mail

**The Natural Gas STAR Program
U.S. EPA (6207J)
1200 Pennsylvania Avenue, NW
Washington, DC 20460**

Express/Overnight Mail

**The Natural Gas STAR Program
U.S. EPA (6207J)
1310 L Street, NW
Washington, DC 20005**

Questions? Please call Roger Fernandez: (202) 343-9086 or Fax (202) 343-2202

